

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-52 (Cancelled).

53. (Currently Amended) An optical fiber comprising:
a glass portion; and
at least one protective coating layer disposed to surround said glass portion;
said at least one protective coating layer having a modulus of elasticity value
~~between -40°C and +60°C between 5 MPa and 600 MPa over the range between -40°C~~
and +60°C.
54. (Previously Presented) The optical fiber according to claim 53, wherein the modulus of elasticity value is not higher than 500 MPa.
55. (Previously Presented) The optical fiber according to claim 54, wherein the modulus of elasticity value is not higher than 450 MPa.
56. (Previously Presented) The optical fiber according to claim 55, wherein the modulus of elasticity value is not higher than 300 MPa.
57. (Previously Presented) The optical fiber according to claim 53, wherein the modulus of elasticity value is not lower than 8 MPa.

58. (Previously Presented) The optical fiber according to claim 56, wherein the modulus of elasticity value is higher than 12 MPa.
59. (Previously Presented) The optical fiber according to claim 53, wherein the protective coating layer is disposed in contact with said glass portion.
60. (Previously Presented) The optical fiber according to claim 53, wherein the protective coating layer is a single protective coating layer which is disposed in contact with said glass portion.
61. (Previously Presented) The optical fiber according to claim 53, wherein variation (V_1) between the modulus of elasticity value measured at -40°C and the modulus of elasticity value measured at +60°C of the protective coating layer, is not higher than 495 MPa.
62. (Previously Presented) The optical fiber according to claim 61, wherein the variation (V_1) between the modulus of elasticity value measured at -40°C and the modulus of elasticity value measured at +60°C of the protective coating layer is not higher than 320 MPa.
63. (Previously Presented) The optical fiber according to claim 62, wherein the variation (V_1) between the modulus of elasticity value measured at -40°C and the

modulus of elasticity value measured at +60°C of the protective coating layer is not higher than 150 MPa.

64. (Previously Presented) The optical fiber according to claim 53, wherein the protective coating layer has an equilibrium modulus (E.M.) higher than 5 MPa.

65. (Previously Presented) The optical fiber according to claim 53, wherein the microbending variation (V_2) between -40°C and +60°C, measured by winding a 100 m length fiber with a tension of 5 g on a 300 mm diameter expandable metallic bobbin coated with rough material, is not higher than 20 (dB/km) / (g/mm).

66. (Previously Presented) The optical fiber according to claim 65, wherein the microbending variation (V_2) between -40°C and +60°C, measured by winding a 100 m length fiber with a tension of 5 g on a 300 mm diameter expandable metallic bobbin coated with rough material, is not higher than 15 (dB/km) / (g/mm).

67. (Previously Presented) The optical fiber according to claim 66, wherein the microbending variation (V_2) between -40°C and +60°C, measured by winding a 100 m length fiber with a tension of 5 g on a 300 mm diameter expandable metallic bobbin coated with rough material, is not higher than 6 (dB/km) / (g/mm).

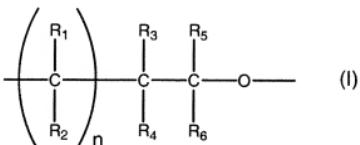
68. (Previously Presented) The optical fiber according to claim 53, wherein the protective coating is obtained by curing a radiation curable composition comprising:

- (a) at least one ethylenically unsaturated polyurethane having a glass transition temperature (T_g) between -40°C and -100°C; and
- (b) at least one polyfunctional reactive diluent monomer.

69. (Previously Presented) The optical fiber according to claim 68, wherein the ethylenically unsaturated polyurethane (a) has a glass transition temperature (T_g) between -50°C and -85°C.

70. (Previously Presented) The optical fiber according to claim 68, wherein the ethylenically unsaturated polyurethane (a) is obtained by reacting the following compounds:

- (A) at least one polyol compound comprising a structural unit represented by the following formula (I):



wherein n is an integer from 0 to 4 inclusive; R₁, R₂, R₃, R₄, R₅ and R₆, which may be equal or different from each other, represent a hydrogen atom or a C₁-C₄ alkyl group;

- (B) at least one polysiocyanate compound; and

(C) at least one (meth) acrylate compound containing at least one hydroxyl group.

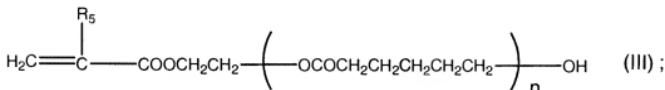
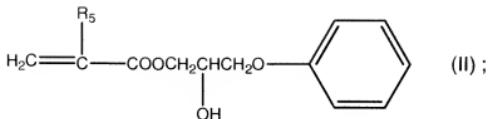
71. (Previously Presented) The optical fiber according to claim 70, wherein the polyol compound (A) is selected from compounds obtained by polymerizing at least one compound selected from ethylene glycol, polyethylene glycol, propylene glycol, polypropylene glycol, tetramethylene glycol, 2-alkyl-1,4-butanediol and 3-alkyl-1,4-butanediol; compounds obtained by ring-opening polymerization of 2-alkyl-tetrahydrofuran or 3-alkyl-tetrahydrofuran; compounds obtained by copolymerization of 2-alkyl-tetrahydrofuran, 3-alkyl-tetrahydrofuran or 2-alkyl-1,4-butanediol, with a cyclic ether, or mixtures thereof.

72. (Previously Presented) The optical fiber according to claim 71, wherein the cyclic ether is selected from ethylene oxide, propylene oxide or tetrahydrofuran, or mixtures thereof.

73. (Previously Presented) The optical fiber according to claim 70, wherein the polyol compound (A) is selected from polybutadiene with a terminal hydroxyl group, hydrogenated polybutadiene with a terminal hydroxyl group, polyisobutylene polyol, 1,6-hexanediol, neopentyl glycol, 1,4-cyclohexane dimethanol, bisphenol A, bisphenol F, alkylene oxide adducts of bisphenol A, alkylene oxide adducts of bisphenol F, dimethylolized compound of dicyclopentadiene, polyester diols, polycaprolactone diols, polycarbonate diols, or mixtures thereof.

74. (Previously Presented) The optical fiber according to claim 70, wherein the polyisocyanate compound (B) is selected from polyisocyanates of 2,4-tolylenediisocyanate, 2,6-tolylenediisocyanate, 1,3-xylenediisocyanate, 1,4-xylenediisocyanate, 1,5-naphthalenediisocyanate, m-phenylenediisocyanate, p-phenylenediisocyanate, 3,3'-dimethyl-4,4'-diphenylmethanediisocyanate, 4,4'-diphenylmethanediisocyanate, 3,3'-dimethylphenylenediisocyanate, 4,4'-biphenylenediisocyanate, 1,6-hexamethylenediisocyanate, isophoronediisocyanate, methylenebis(4-cyclohexylisocyanate), 2,2,4-trimethylhexamethylenediisocyanate, 2,4,4-trimethylhexamethylenediisocyanate, 1,4-hexa-methylenediisocyanate, bis (2-isocyanateethyl)fumarate, 6-isopropyl-1,3-phenyldiisocyanate, 4-diphenylpropaneisocyanate, lysinediisocyanate, or mixtures thereof.

75. (Previously Presented) The optical fiber according to claim 70, wherein the (meth)acrylate compound having at least one hydroxyl group (C) is selected from 2-hydroxyethyl-(meth)acrylate, 2-hydroxypropyl (meth)-acrylate, 2-hydroxy-3-phenyloxypropyl (meth)-acrylate, propanediol(meth)acrylate, 1,4-butanediolmono(meth)acrylate, 2-hydroxyalkyl-(meth)acryloyl phosphate, 4-hydroxycyclohexyl(meth)acrylate, 1,6-hexanediol-mono(meth)acrylate, neopentylglycolmono(meth)-acrylate, trimethylolpropane-di(meth)acrylate, trimethylethanedi(meth) acrylate, penta-erythritholtri(meth) acrylate, dipenta-erythritolpenta(meth)acrylate, (meth)acrylates represented by the following formulae (II) or (III):



wherein R_5 represents a hydrogen atom or a methyl group and n is an integer of from 1 to 15 inclusive; or mixtures thereof.

76. (Previously Presented) The optical fiber according to claim 68, wherein the polyfunctional reactive diluent monomer (b) is selected from ethylene glycol di(meth)acrylate, tetraethylene glycol di(meth)acrylate, propanediol di(meth)acrylate, 1,4-butanediol di(meth)acrylate, trimethylolpropane di(meth)acrylate, trimethylolpropane tri(meth)acrylate, neopentyl glycol di(meth)acrylate, 1,6-hexanediol di(meth)acrylate, 1,6-hexamethylenedihydroxy di(meth)acrylate, polyethylene glycol di(meth)acrylate, polypropylene glycol di(meth)acrylate, hydroxypivalic acid neopentyl glycol ester di(meth)acrylate, trimethylolpropane tri(meth)acrylate, trimethylolpropanetrioxymethyl (meth)acrylate, tricyclodecanedimethanol di(meth)acrylate, dicyclopentadiene di(meth)acrylate, pentaerythritol tri(meth)acrylate, pentaerythritol tetra(meth)acrylate, pentaerythritol trioxymethyl (meth)acrylate, pentaerythritol tetraoxymethyl (meth)acrylate, di(meth)acrylate of a diol, the addition compound of ethylene oxide or propylene oxide with bisphenol A, hydrogenated bisphenol A glycidyl ether of bisphenol A, or mixtures thereof.

77. (Previously Presented) The optical fiber according to claim 76, wherein the polyfunctional reactive diluent monomer (b) is 1,6-hexane diol diacrylate, pentaerythritol triacrylate, or a mixture of pentaerythritol triacrylate and pentaerythritol tetraacrylate.

78. (Previously Presented) The optical fiber according to claim 68 wherein the radiation curable composition comprises at least one polymerization initiator (c).

79. (Previously Presented) The optical fiber according to claim 78, wherein the polymerization initiator (c) is selected from benzophenone, benzoin, benzoisobutyl ether, benzyl, benzoinethyl ether, 2,2-dimethoxy-2-phenylacetophenone, xanthone, fluorenone, 4-chlorobenzophenone, triphenylamine, carbazole, 3-methylacetophenone, 4,4'-dimethoxybenzophenone, 4,4'-diaminobenzophenone, Michler's ketone, benzoin propyl ether, acetophenone diethyl ketal, benzoin ethyl ether, 1-hydroxycyclohexylphenyl ketone, 2-hydroxy-2-methylpropiophenone, 4'-isopropyl-2-hydroxy-2-methylpropiophenone, α,α -dichloro-4-phenoxy-acetophenone, benzyl dimethyl ketal, 2,2-diethoxyacetophenone cholorothioxantone, 2-isopropylthioxantone, diethylthioxantone, 3,3-dimethyl-4-methoxybenzophenone, 2-methyl-1-[4-(methylthio)phenyl]-2-morpholinopropanone, α -hydroxycyclohexylphenyl ketone, 2,4,6-trimethylbenzoyldiphenylphosphine oxide, or mixtures thereof.

80. (Previously Presented) The optical fiber according to claim 78, wherein the radiation curable composition comprises at least one photo-sensitizer (f).

81. (Previously Presented) The optical fiber according to claim 80, wherein the photo-sensitizer (f) is selected from amines, ureas, phosphorus compounds, sulfur compounds, nitrils, or mixtures thereof.

82. (Previously Presented) The optical fiber according to claims 80, wherein the polymerization initiator (c) and the photo-sensitizer (f) are present in the radiation curable composition in a total amount of from 0.01% by weight to 10% by weight with respect to the total weight of said radiation curable composition.

83. (Currently Amended) The optical fiber according to claim 68, wherein the radiation curable composition comprises at least one monofunctional monofunctional reactive diluent monomer (d).

84. (Previously Presented) The optical fiber according to claim 83, wherein the monofunctional reactive diluent monomer (d) is selected from 2-hydroxyethyl (meth)acrylate; 2-hydroxypropyl (meth)acrylate; 2-ethylhexyl (meth)acrylate; butoxethyl (meth)acrylate; tetrahydrofuryl (meth)acrylate; linear or branched alkyl (meth)acrylates; n-hexyl (meth)acrylate; cyclohexyl (meth)acrylate; isobornyl (meth)acrylate; ethoxylated alkyl (meth)acrylates; dicyclopentenyl (meth)acrylate; diethylene glycol (meth)acrylate; ethoxydiethylene glycol (meth)acrylate; benzyl (meth)acrylate; polyethylene glycol(meth)acrylate; polypropylene glycol (meth)acrylate; methoxypolyethylene glycol (meth)acrylate; methoxypolypropylene glycol

(meth)acrylate; 2-phenoxyethyl (meth)acrylate; phenoxypolyethylene glycol (meth)acrylate; alkylphenoxyethyl (meth)acrylate; alkylphenoxypropylalkylene glycol (meth)acryate; 2-hydroxy-3-phenyloxypropyl (meth)acrylate; tetrahydrofuryloxypropylalkylene glycol (meth)-acrylate; dicyclopentyloxypropylalkylene glycol (meth)acrylate; 2-hydroxyalkyl (meth)acryloyl phosphate; polyfuroalkyl (meth)acrylate; N-vinyl pyrrolidone; N-vinyl caprolactam; diacetone (meth)acrylamide; isobutoxymethyl (meth)acrylamide; N,N-dimethyl acrylamide; t-octyl (meth)acrylamide; dialkylaminoethyl (meth)acrylate; (meth)acryloylmorphoine; or mixtures thereof.

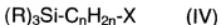
85. (Previously Presented) The optical fiber according to claim 84, wherein the linear or branched alkyl (meth)acrylates are selected from butyl (meth)acrylate, octyl-(meth)acrylate, decyl (meth)acrylate, tridecyl (meth)acrylate, stearyl (meth)acrylate, lauryl (meth)acrylate, or isodecyl (meth)acrylate.

86. (Previously Presented) The optical fiber according to claim 84, wherein the ethoxylated alkyl (meth)acrylates, are selected from methoxyethyl (meth)acrylate, ethoxylethyl (meth)acrylate, butoxyethyl (meth)acrylate, or 2-(2-ethoxyethoxy)ethyl (meth)acrylate.

87. (Previously Presented) The optical fiber according to claim 84, wherein the alkylphenoxyethyl (meth)acrylate is nonylphenoxyethyl (meth)acrylate.

88. (Previously Presented) The optical fiber according to claim 84, wherein the monofunctional reactive diluent monomer (d) is isobornyl acrylate, 2-phenoxyethyl acrylate, nonylphenoxyethyl acrylate, C₈-C₁₃ alkyl acrylates, lauryl acrylate, or isodecyl acrylate.
89. (Previously Presented) The optical fiber according to claim 83, wherein the monofunctional reactive diluent monomer (d) is present in the radiation curable composition in an amount of 3% by weight to 25% by weight with respect to the total weight of said radiation curable composition.
90. (Previously Presented) The optical fiber according to claim 68 wherein the radiation curable composition comprises at least one adhesion promoter (e).
91. (Previously Presented) The optical fiber according to claim 90, wherein the adhesion promoter (e) is an organo-functional silane selected from octyltriethoxysilane, methyltriethoxysilane, methyltrimethoxysilane, tris(3-trimethoxysilylpropyl) isocyanurate, vinyltriethoxysilane, vinyltrimethoxysilane, vinyl-tris(2-methoxyethoxy) silane, vinylmethyl-dimethoxysilane, γ -methacryloxypropyltrimethoxy-silane, β -(3,4-epoxycyclohexyl) ethyltrimethoxy-silane, γ -glycidoxypolypropyltrimethoxysilane, γ -mercaptopropyltrimethoxysilane, organo-modified polydimethylsiloxane, γ -ureidopropyltrialkoxy-silane, γ -ureidopropyltrimethoxysilane, γ -isocyanatepropyltriethoxysilane, or mixtures thereof.

92. (Previously Presented) The optical fiber according to claim 90, wherein the adhesion promoter (e) is represented by the following structural formula (IV):



wherein the groups R, which may be identical to or different from each other, are chosen from: alkyl, alkoxy or aryloxy groups or from halogen atoms, on condition that at least one of the groups R is an alkoxy or aryloxy group; n is an integer between 1 and 6 inclusive; X is a group selected from nitroso, mercapto, epoxide, vinyl, imido, chloro, $-(S)_mC_nH_{2n}-Si-(R)_3$ wherein m and n are integers between 1 and 6 inclusive and the groups R are defined as above.

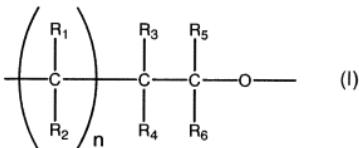
93. (Currently Amended) The optical fiber according to claim[[s]] 90, wherein the adhesion promoter (e) is present in the radiation curable composition in an amount of 0.1% by weight to 2.5% by weight with respect to the total weight of said radiation curable composition.

94. (Previously Presented) A radiation curable composition comprising:

- (a) from 50% by weight to 95% by weight with respect to the total weight of said radiation curable composition, of at least one ethylenically unsaturated polyurethane having a glass transition temperature (T_g) between -40°C and -100°C; and
- (b) from 5% by weight to 50% by weight with respect to the total weight of said radiation curable composition, of at least one polyfunctional reactive diluent monomer.

95. (Previously Presented) radiation curable composition according to claim 94, wherein the ethylenically unsaturated polyurethane (a) is obtained by reacting the following compounds:

- (A) at least one polyol compound comprising a structural unit represented by the following formula (I):



wherein n is an integer comprised from 0 to 4 inclusive; R₁, R₂, R₃, R₄, R₅ and R₆, which may be equal or different from each other represent a hydrogen atom or a C₁-C₄ alkyl group;

- (B) at least one polysiocyanate compound; and
(C) at least one (meth)acrylate compound containing at least one hydroxyl group.

96. (Previously Presented) The radiation curable composition according to claim 94, wherein the polyfunctional reactive diluent monomer is selected from ethylene glycol di(meth)acrylate, tetraethylene glycol di(meth)acrylate, propanediol di(meth)acrylate, 1,4-butanediol di(meth)acrylate, trimethylolpropane di(meth)acrylate, trimethylolpropane tri(meth)acrylate, neopentyl glycol di-(meth)acrylate, 1,6-hexanediol di(meth)acrylate, 1,6-hexamethylenedithydroxy di(meth)acrylate, polyethylene glycol di(meth)acrylate, polypropylene glycol di(meth)acrylate, hydroxypivalic acid neopentyl glycol ester

di(meth)acrylate, trimethylolpropane tri(meth)acrylate, trimethylolpropanetroxyethyl (meth)acrylate, tricyclodecanedimethanol di(meth)acrylate, dicyclopentadiene di(meth)acrylate, pentaerythritol tri(meth)acrylate, pentaerythritol tetra(meth)acrylate, pentaerythritol trioxyethyl (meth)acrylate, pentaerythritol tetraoxyethyl (meth)acrylate, di(meth)acrylate of a diol, the addition compound of ethylene oxide or propylene oxide with bisphenol A, hydrogenated bisphenol A glycidyl ether of bisphenol A, or mixtures thereof.

97. (Previously Presented) The radiation curable composition according to claim 94, further comprising at least one polymerization initiator (c).

98. (Previously Presented) The radiation curable composition according to claim 97, wherein the polymerization initiator (c) is selected from benzophenone, benzoin, benzoinisobutyl ether, benzyl, benzoinethyl ether, 2,2-dimethoxy-2-phenylacetophenone, xanthone, fluorenone, 4-chlorobenzophenone, triphenylamine, carbazole, 3-methylacetophenone, 4,4'-dimethoxybenzo-phenone, 4,4'-diaminobenzophenone, Michler's ketone, benzoin propyl ether, acetophenone diethyl ketal, benzoin ethyl ether, 1-hydroxycyclohexylphenyl ketone, 2-hydroxy-2-methylpropiophenone, 4'-isopropyl-2-hydroxy-2-methylpropiophenone, α,α -dichloro-4-phenoxy-acetophenone, benzyl dimethyl ketal, 2,2-diethoxyacetophenone chlorothioxantone, 2-isopropylthioxantone, diethylthioxantone, 3,3-dimethyl-4-methoxybenzophenone, 2-methyl-1-[4-(methylthio)phenyl]-2-morpholinopropanone, α -

hydroxycyclohexylphenyl ketone, 2,4,6-trimethylbenzoyldiphenylphosphine oxide, or mixtures thereof.

99. (Previously Presented) The radiation curable composition according to claim 97, further comprising at least one photo-sensitizer (f).

100. (Previously Presented) The radiation curable composition according to claim 99, wherein the photo-sensitizer (f) is selected from amines, ureas, phosphorus compounds, sulfur compounds, nitrils, or mixtures thereof.

101. (Previously Presented) The radiation curable composition according to claim 90, further comprising at least one monofunctional reactive diluent monomer (d).

102. (Previously Presented) The radiation curable composition according to claim 101, wherein the monofunctional reactive diluent monomer (d) is selected from 2-hydroxyethyl (meth)acrylate; 2-hydroxypropyl (meth)acrylate; 2-ethylhexyl (meth)acrylate; butoxyethyl (meth)acrylate; tetrahydrofurfuryl (meth)acrylate; linear or branched alkyl (meth)acrylates; butyl (meth) acrylate, octyl-(meth)acrylate, decyl (meth)acrylate, tridecyl (meth)acrylate, stearyl (meth)acrylate, lauryl (meth)acrylate, isodecyl (meth)acrylate); n-hexyl (meth)acrylate; cyclohexyl (meth)acrylate; isobornyl (meth)acrylate; ethoxylated alkyl (meth)acrylates; methoxyethyl (meth)acrylate, ethoxyethyl (meth)acrylate, butoxyethyl (meth)acrylate, 2-(2-ethoxyethoxy)ethyl (meth)acrylate; dicyclopentenyl (meth)acrylate; diethylene glycol (meth)acrylate;

ethoxydiethylene glycol (meth)acrylate; benzyl (meth)acrylate; polyethylene glycol (meth)acrylate; polypropylene glycol (meth)acrylate; methoxypolyethylene glycol (meth)acrylate; methoxypolypropylene glycol (meth)acrylate; 2-phenoxyethyl (meth)acrylate; phenoxypolyethylene glycol (meth)acrylate; alkylphenoxyethyl (meth)acrylate; nonylphenoxyethyl (meth)acrylate; alkylphenoxypropylalkylene glycol (meth)acrylate; 2-hydroxy-3-phenyloxypropyl (meth)acrylate; tetrahydrofuryloxypropylalkylene glycol (meth)-acrylate; dicyclopentyloxypolyalkylene glycol (meth)acrylate; 2-hydroxyalkyl(meth)acryloyl phosphate; polyfluoroalkyl (meth)acrylate; N-vinyl pyrrolidone; N-vinyl caprolactam; diacetone (meth)acrylamide; isobutoxymethyl (meth)acrylamide; N,N-dimethyl acrylamide; t-octyl (meth)acrylamide; dialkylaminoethyl (meth)acrylate; (meth)acryloylmorpholine; or mixtures thereof.

103. (Previously Presented) The radiation curable composition according to claim 94, further comprising at least one adhesion promoter (e).

104. (Previously Presented) The radiation curable composition according to claim 103, wherein the adhesion promoter (e) is an organo-functional silane selected from octyltriethoxysilane, methyltriethoxysilane, methyltrimethoxysilane, tris(3-trimethoxysilylpropyl)isocyanurate, vinyltriethoxysilane, vinyltrimethoxysilane, vinyl-tris(2-methoxyethoxy) silane, vinylmethyl-dimethoxysilane, γ -methacryloxypropyltrimethoxy-silane, β -(3,4-epoxycyclohexyl)ethyltrimethoxy-silane, γ -glycidoxypropyltrimethoxysilane, γ -mercaptopropyltrimethoxysilane, organo-modified

polydimethylsiloxane, γ -ureidopropyltrialkoxy-silane, γ -ureidopropyltrimethoxysilane, γ -isocyanatepropyltriethoxysilane, or mixtures thereof.

105. (Previously Presented) The radiation curable composition according to claim 94, having a Brookfield viscosity between 1000 m.Pa.sec and 4000 m.Pa.sec in a temperature range of from 20°C to 80°C.

106. (Currently Amended) A method for controlling the attenuation losses caused by microbending on the signal transmitted by an optical fiber comprising an internal glass portion, which comprises providing at least one protective coating layer disposed to surround said glass portion, wherein said at least one protective coating layer has a modulus of elasticity value between -40°C and +60°C between 5 MPa and 600 MPa over the range between -40°C and +60°C.

107. (Previously Presented) The method according to claim 106, wherein the modulus of elasticity value between -40°C and +60°C is not higher than 500 MPa.

108. (Previously Presented) The method according to claim 107, wherein the modulus of elasticity value between -40°C and +60°C is not higher than 450 MPa.

109. (Previously Presented) The method according to claim 108, wherein the modulus of elasticity value between -40°C and +60°C is not higher than 300 MPa.

110. (Previously Presented) method according to claim 106, wherein the modulus of elasticity value between -40°C and +60°C is not lower than 8 MPa.

111. (Previously Presented) The method according to claim 110, wherein the modulus of elasticity value between -40°C and +60°C is higher than 12 MPa.

112. (Previously Presented) The method according to claim 107, wherein said protective coating layer is obtained by curing a radiation curable composition comprising:

- (a) at least one ethylenically unsaturated polyurethane having a glass transition temperature (T_g) between -40°C and -100°C; and
- (b) at least one polyfunctional reactive diluent monomer.

113. (New) The optical fiber according to claim 53, wherein said at least one protective coating layer has a refractive index at room temperature higher than the refractive index of the glass portion.